DATE OF DEPOSIT: July 25, 2003

Please type a plus sign (+) Under the Paperwork Reduction			respor		ent and Trademark C	Office; U	.S. DEPA	RTME	PTO/SB/05 (03-01) 02. OMB 0651-0032 NT OF COMMERCE OMB control number.	
UTILITY				Attorney Docket No. 02-mAE2-229						
PATENT APPLICATION				First Inventor Joseph C. Zuercher						
TRANSMITTAL				APPARATUS AND METHOD FOR REAL TIME DETERMINATION OF ARC FAULT ENERGY, *						
(Only for new nonprovisio	w nonprovisional applications under 37 CFR 1.53(b))			Express Mail Label No.			EV207366908US			
	PLICATION ELEMENTS 00 concerning utility patent application contents.			ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231						
1. Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) Applicant claims small entity status. See 37 CFR 1.27. Specification [Total Pages 29] - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure 4. V Drawing(s) (35 U.S.C. 113) [Total Sheets 6] 5. Oath or Declaration [Total Pages 1] Newly executed (original or copy) Copy from a prior application (37 CFR 1.63 (d)) (for continuation/divisional with Box 18 completed) i. DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).				7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. Computer Readable Form (CRF) b. Specification Sequence Listing on: i. CD-ROM or CD-R (2 copies); or ii. paper c. Statements verifying identity of above copies ACCOMPANYING APPLICATION PARTS 9. Assignment Papers (cover sheet & document(s)) 10. 37 CFR 3.73(b) Statement Power of (when there is an assignee) 11. English Translation Document (if applicable) 12. Information Disclosure Statement (IDS)/PTO-1449 13. Preliminary Amendment 14. Copies of IDS (Should be specifically itemized) 15. Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.						
6. Application Data Sheet. See 37 CFR 1.76 17. Other:										
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76: Continuation Divisional Continuation-in-part (CIP) Of prior application No.: Fror application information: Examiner Group Art Unit: For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.										
19. CORRESPONDENCE ADDRESS										
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Kirk D

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PTO/SB/17 (10-02)

Approved for use through 10/31/2002. OMB 0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection information unless it displays a valid OMB control number Complete if Known FEE TRANSMITTAL Application Number Filed Herewith Filing Date for FY 2003 Joseph C. Zuercher First Named Inventor **Examiner Name** Applicant claims small entity status. See 37 CFR 1.27 Art Unit 1470.00 TOTAL AMOUNT OF PAYMENT (\$) 02-mAE2-229 Attorney Docket No METHOD OF PAYMENT (check all that apply) FEE CALCULATION (continued) Money Order 3. ADDITIONAL FEES Credit card Check Other Large Entity , Small Entity ✓ Deposit Account: Fee Fee Description Deposit (\$) Code (\$) Fee Paid 05-0275 ccount 1051 130 2051 65 Surcharge - late filing fee or oath Number Deposit 2052 Surcharge - late provisional filing fee or 1052 50 25 Eaton Corporation Account cover sheet 1053 130 1053 130 Non-English specification The Commissioner is authorized to: (check all that apply) 1812 2.520 1812 2.520 For filing a request for ex parte reexamination Charge fee(s) indicated below ✔ Credit any overpayments 1804 920* Requesting publication of SIR prior to 1804 920* Charge any additional fee(s) during the pendency of this application Charge fee(s) indicated below, except for the filing fee 1805 1,840* 1805 1,840 Requesting publication of SIR after Examiner action to the above-identified deposit account. 1251 110 2251 55 Extension for reply within first month **FEE CALCULATION** Extension for reply within second month 1252 400 2252 200 1. BASIC FILING FEE 1253 920 2253 460 arge Entity Small Entity Extension for reply within third month Fee Paid Fee Fee Code (\$) Fee Fee Code (\$) Fee Description 2254 720 1254 1,440 Extension for reply within fourth month 2255 980 Extension for reply within fifth month 1255 1.960 1001 740 2001 370 Utility filing fee 750.00 1002 330 2002 165 Design filing fee 1401 320 2401 160 Notice of Appeal 2402 1003 510 2003 255 Plant filing fee 1402 320 160 Filing a brief in support of an appeal 1004 740 2004 370 Reissue filing fee 1403 280 2403 140 Request for oral hearing Provisional filing fee 1005 160 2005 80 1451 1,510 1451 1.510 Petition to institute a public use proceeding 1452 110 2452 55 Petition to revive - unavoidable SUBTOTAL (1) (\$) 750.00 1453 1,280 2453 640 Petition to revive - unintentional 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE 1501 1,280 2501 640 Utility issue fee (or reissue) Fee from Extra Claims 1502 460 2502 230 Design issue fee 468.00 46 -20** = 26 × 18.00 **Total Claims** 2503 1503 620 310 Plant issue fee Independent 3 × 84.00 = 252.00 6 - 3** = 1460 130 1460 130 Petitions to the Commissioner 1807 Processing fee under 37 CFR 1.17(q) 1807 50 50 Large Entity Small Entity 1806 180 1806 180 Submission of Information Disclosure Stmt Fee Description Recording each patent assignment per Code (\$) Code (\$) 8021 8021 40 40 property (times number of properties) Claims in excess of 20 1202 18 2202 9 Filing a submission after final rejection (37 CFR 1.129(a)) 1809 740 2809 370 1201 84 2201 42 Independent claims in excess of 3 1203 280 2203 140 Multiple dependent claim, if not paid 1810 740 2810 For each additional invention to be examined (37 CFR 1.129(b)) 1204 84 2204 42 ** Reissue independent claims over original patent 1801 740 2801 Request for Continued Examination (RCE) 1802 1802 900 900 Request for expedited examination 1205 18 2205 9 Reissue claims in excess of 20 and over original patent of a design application (\$)720.00 Other fee (specify) SUBTOTAL (2) *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) **or number previously paid, if greater, For Reissues, see above (Complete (if applicable Registration No. Name (Print/Type) **A**ouser Telephone 412.566.6083

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37,357

Date

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.